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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,679	12/05/2003	Kenneth M. Sprouse	7784-000644	3173
27572	7590	02/02/2006	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			KOCZO JR, MICHAEL	
			ART UNIT	PAPER NUMBER
			3746	

DATE MAILED: 02/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/729,679	<b>Applicant(s)</b> SPOUSE ET AL	
	<b>Examiner</b> Michael Koczo, Jr.	<b>Art Unit</b> 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 November 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-25,35-47 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 18-21,35-45 and 47 is/are allowed.  
6) ☒ Claim(s) 12,13,15-17,22-25 and 46 is/are rejected.  
7) ☒ Claim(s) 14 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Applicant's arguments filed on November 29, 2005 have been fully considered but they are not persuasive.

#### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the structure of claim 46 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

The disclosure is objected to because of the following informalities:

Paragraph 51, line 3, "20°" should read --40°--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

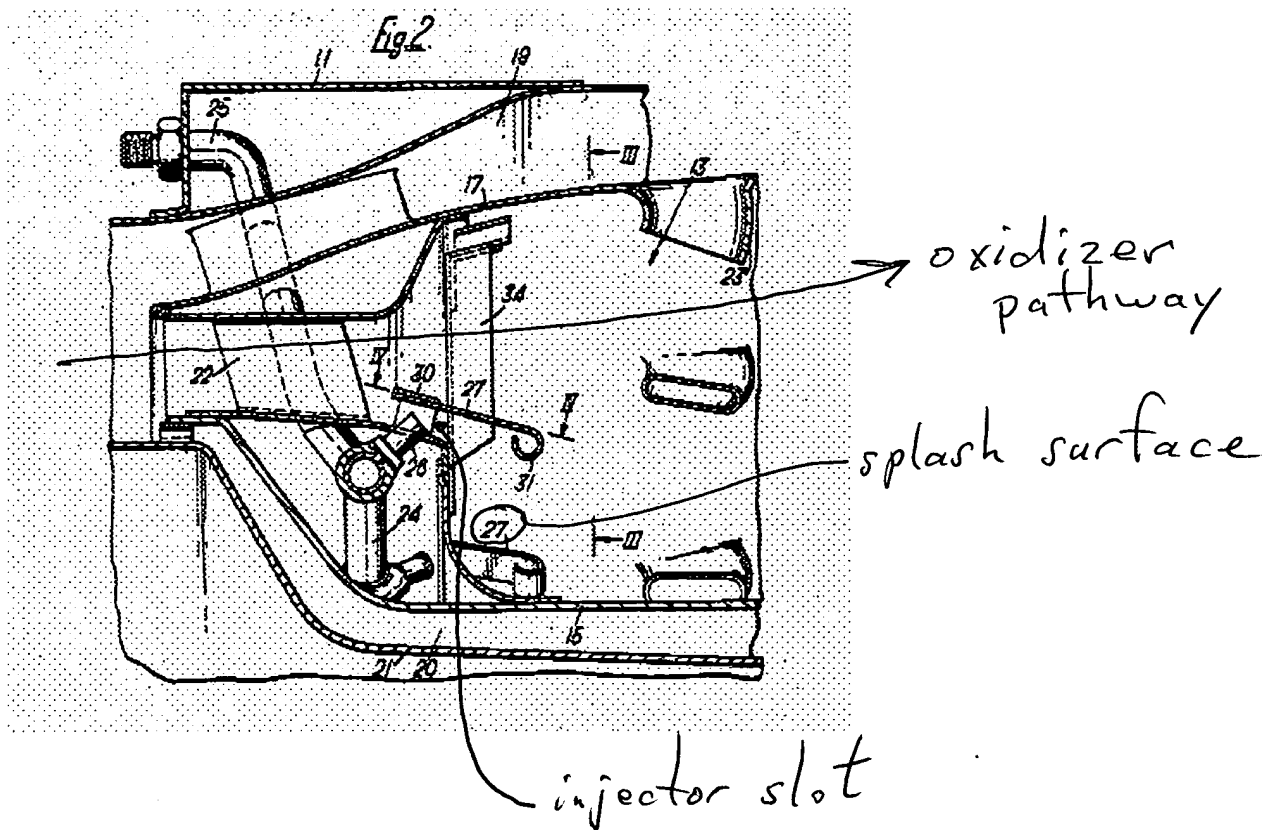
Claim 46 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no basis in the application as originally filed for the limitation "a plurality of injector slots to form an elongated slot".

***Claim Rejections - 35 USC § 103***

Claims 12, 13, 15, 16, 17, 22, 23, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlisle in view of Amann. Carlisle discloses the invention substantially as claimed. However, Carlisle does not disclose a preheat section to heat the oxidizer. Amann discloses that it is known to use a regenerator 7 to preheat the oxidizer in order to recover energy which would otherwise be wasted. In view of this teaching, it would have been obvious to

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provide the gas turbine of Carlisle with a recuperator for heating the oxidizer. Figure 2 of Carlisle is reproduced below with the relevant portions labeled with the corresponding claim elements. Regarding claims 12 and 22, the “wherein” clauses merely recite a desired result. Whether or not the fuel substantially mixes with the oxidizer from the oxidizer pathway prior to combusting is dependent on operating parameters, such as the flow rates, pressures and temperatures of the fuel and air, which are beyond the scope of the claims. The structure of Carlisle is furthermore inherently capable of mixing the fuel with the stream of oxidizer before any portion of the fuel combusts given the right operating parameters. Regarding claims 23 to 25, these claims merely recite the intended use of the injector and do not define structurally over the injector of Carlisle. The injector of Carlisle is inherently capable of injecting the different fuels as recited in claim 25.

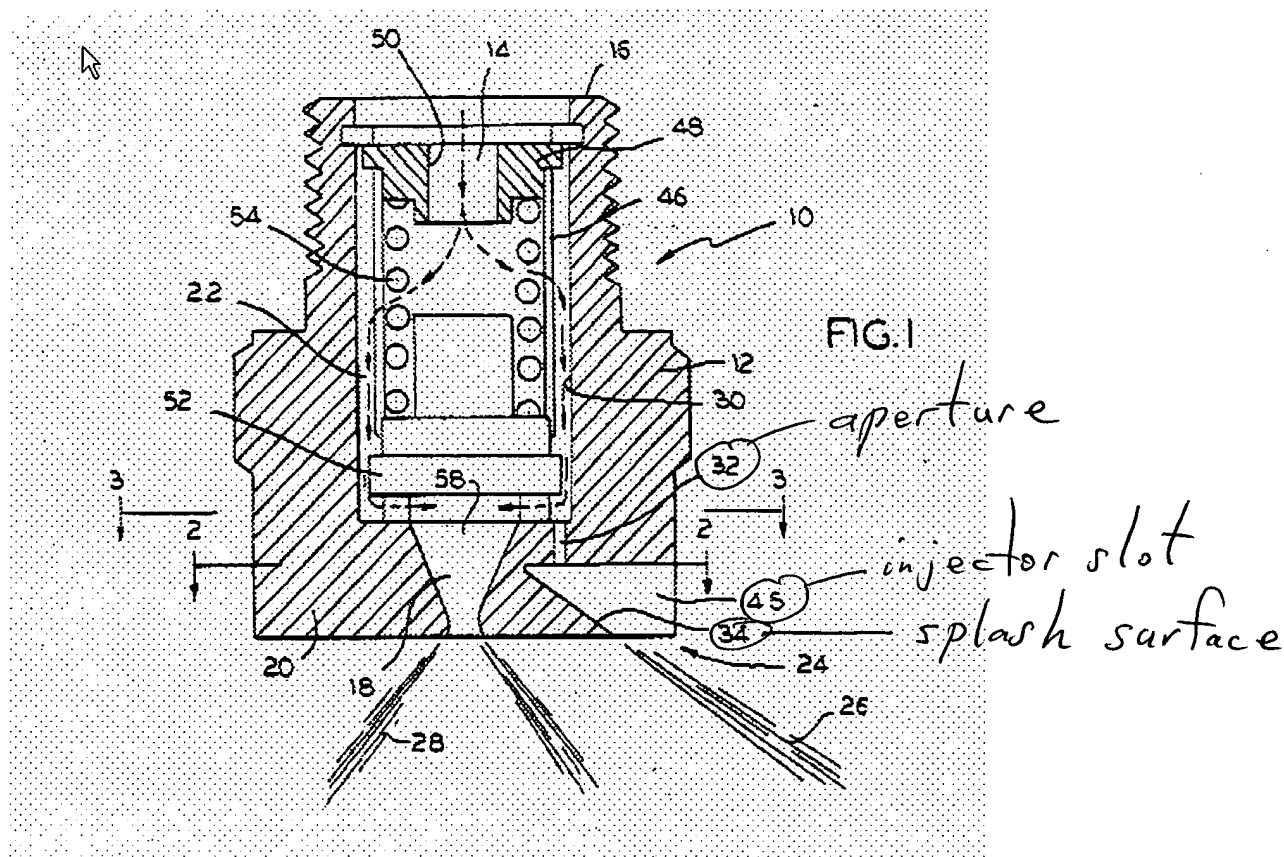


Claims 12, 13, 15, 16, 17, 22, 23, 24 and 25 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Shekelton et al. in view of Amann. Shekelton et al. disclose the invention substantially as claimed. However, Shekelton et al. do not disclose a preheat section to heat the oxidizer. Amann discloses that it is known to use a regenerator 7 to preheat the oxidizer in order to recover energy which would otherwise be wasted. In view of this teaching, it would have been obvious to provide the gas turbine of Shekelton et al. with a recuperator for heating the oxidizer. Figure 1 of Shekelton et al. is reproduced below with the relevant portions labeled with the corresponding claim elements. Regarding claims 12 and 22, the “wherein” clauses merely recite a desired result. Whether or not the fuel substantially mixes with the oxidizer from

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the oxidizer pathway prior to combustor is dependent on operating parameters, such as the flow rates, pressures and temperatures of the fuel and air, which are beyond the scope of the claims.

The structure of Carlisle is furthermore inherently capable of mixing the fuel with the stream of oxidizer before any portion of the fuel combusts. Regarding claims 23 to 25, these claims merely recite the intended use of the injector and do not define structurally over the injector of Shekelton et al. The injector of Shekelton et al. is inherently capable of injecting different fuels.



***Response to Arguments***

Applicant argues that Carlisle does not teach an injector slot near an oxidizer pathway. Referring to figure 2 of Carlisle, the injector slot is adjacent the oxidizer pathway. This is readable as an injector slot near the oxidizer pathway.

Applicant argues that Shekelton et al do not teach an injector slot near an oxidizer pathway. Any flow of oxidizer is readable as an oxidizer pathway. Referring to figures 1 and 4 of Shekelton et al, it can be seen that the oxidizer flows adjacent the injector nozzles. That is, the injector slot 45 is near the oxidizer pathway.

***Allowable Subject Matter***

Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 18 to 21, 35 to 45 and 47 are allowed.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period



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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry relating to patent applications in general should be directed to the Patent Assistance Center at 1-800-786-9199.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Koczo, Jr. whose telephone number is 571-272-4830. The examiner can normally be reached on M-Th; 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached at 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Koczo, Jr.  
Primary Examiner  
Art Unit 3746